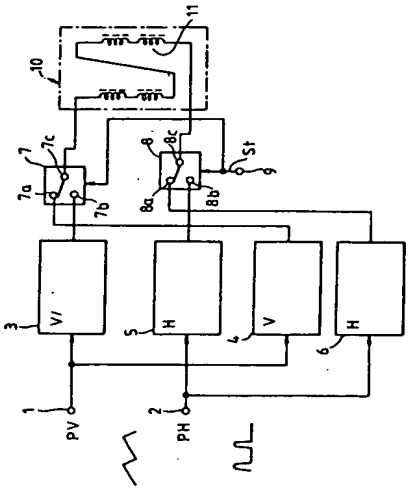
(54) **TELEVISION RECEIVER**
(11) **2-114770 (A)** (43) 26.4.1990 (19) JP
(21) Appl. No. 63-268893 (22) 25.10.1988
(71) SONY CORP (72) MITSUMASA SAITO(2)
(51) **Int. Cl⁵. H04N3/27,H04N5/46,H04N7/00**

PURPOSE: To prevent deterioration in the picture quality without increasing the interval of scanning lines by expanding a spot size of an electron beam when number of horizontal scanning lines is less.

CONSTITUTION: When a television signal of the NTSC system is received, switches 7, 8 are controlled by a control signal St supplied to a terminal 9, and a current of a parabolic waveform from a vertical parabolic waveform generating circuit 3 and a current of a parabolic waveform from a horizontal parabolic waveform generating circuit 5 are fed to an electromagnetic quartet pole 10 via the switches 7, 8. As a result, the current of the parabolic waveform of a horizontal period is modulated by the current of the parabolic waveform of one vertical period and fed to the pole 10 to form a magnetic field. Thus, the beam spot shape is corrected.

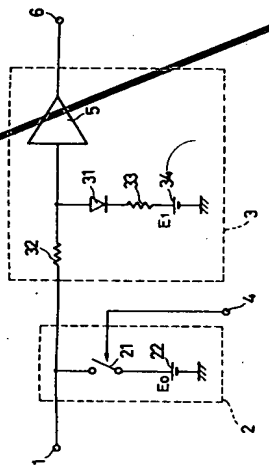


4: vertical parabolic waveform generation, 6: horizontal parabolic waveform generation

(54) **CATHODE RAY TUBE CIRCUIT**
(11) **2-114771 (A)** (43) 26.4.1990 (19) JP
(21) Appl. No. 63-267295 (22) 25.10.1988
(71) SONY CORP (72) MORIHISA USAMI(2)
(51) **Int. Cl⁵. H04N5/16,H04N5/57**

PURPOSE: To match a reference level of a video signal with high accuracy and also to increase only an intermediate brightness while keeping a white peak level as it is by applying nonlinear amplification to the video signal just after clamping the signal.

CONSTITUTION: A video signal such as a luminance signal is inputted to a clamp circuit 2, in which a bottom level of the waveform is clamped to a voltage E_0 of a DC voltage source 22 and the result is inputted to a nonlinear amplifier circuit 3. A diode 31 of the nonlinear amplifier circuit 3 is turned on when the voltage thereacross reaches a voltage higher than E_1+Vf and the input signal is divided (attenuated) by resistors 32, 33 in this case and the resulting voltage is fed to an amplifier 5. With a high luminance video signal higher than the voltage E_1+Vf inputted, since the signal voltage is divided by the resistors 32, 33, then it is attenuated, that is, a kind of limit state. The signal is amplified by the amplifier 5, then only the intermediate brightness level is increased while the white peak level (P_{MAX}) is kept as it is.



(54) **VIDEO SIGNAL CIRCUIT**
(11) **2-114772 (A)** (43) 26.4.1990 (19) JP
(21) Appl. No. 63-269675 (22) 25.10.1988
(71) NEC CORP (72) TAKESHI KUWAJIMA
(51) **Int. Cl⁵. H04N5/18,H04N7/093**

PURPOSE: To reproduce the clamping without giving damage to a back porch of a video signal by detecting a delay between a horizontal synchronizing signal of a video signal and a synchronizing pulse signal, controlling the pulse width of the synchronizing pulse signal so as to include the clamp operation period within the SYNC tip period of the video signal.

CONSTITUTION: A comparator 7 operated subsequently by the synchronizing pulse signal receives a difference signal of a subtractor 6, inputs a signal obtained through the comparison with a prescribed reference level V'_{TH} to a control input terminal of a switch circuit 8 receiving the synchronizing pulse signal to control the pulse width of the synchronizing pulse signal. The synchronizing pulse signal whose pulse width is controlled by the switch circuit 8 is inputted to a clamp circuit 2 and its operating period is controlled. Thus, it is possible to include the operating period of the clamp circuit 2 within the SYNC tip period of the input video signal so that the clamping operation does not exist in the period of back porch.